Software Requirement Specification

For Student Gymkhana System

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1.0 Introduction

1.1 Purpose

The aim of the document is to gather and analyse and give an in-depth insight of the complete Student Gymkhana System of IIITDM Jabalpur. It will define the users and functionality of the Software.

Also, we shall predict and sort out how we hope this product will be used in order to gain a better understanding of the Software, outline concepts that may be developed later, and document ideas that are being considered, but may be discarded as the product develops. This document describes the project's target audience and its user interface, hardware and software requirements. It defines how our client, team and audience see the product and its functionality. Nonetheless, it helps any designer and developer to assist in Software Development Lifecycle (SDLC) processes.

1.2 Scope of Project

The Software System will be Gymkhana Online Web Services Portal to make various events and activities of Gymkhana easier with various tools. Accessing the information and performing certain activities will be easy using the Software.
Software will facilitate various Gymkhana Activities and Administration.

1.3 Document Convention

When writing this SRS for Student Gymkhana Software, the following terminologies are used:

●   Web server (WS): Web Server over which all the data and information is stored.
●   Database: Database is collection of data of the Institute's various departments.Access will be given on proper authentication.
●   Client: The user of the Software.

1.4 Intended Audience and Reading Suggestions

Intended Audience of the SRS are students (IIITDM Jabalpur as well as outside) and developers, faculties and Staff. It specifically addresses issues of Gymkhana System.

1.5 References

IEEE. IEEE Standard 830-1998 IEEE Recommended Practice for Software Requirements Specifications. IEEE Computer Society, 1998.

2.0 Overall Description

2.1 Product Perspective

Student Gymkhana System is itself a subsystem of College System. Software will take input from College Database of Students and Faculty.

There are specifically 7 Actors in the System, Election Controller, Convenor, Dean Students (Head of Gymkhana), Convenor-Technical Council, Convenor-Sports Council, Convenor- Cultural Council and students. Different Activities are performed by different actors.

2.2 Product Functions (Functional Requirements)

Student Gymkhana will provide a number a functions:

⇨ Allow the Election Controller to hold elections and hence Form Senate.
Each student will be able to vote using the portal.
The result of elections will also be released online.
Senate will constituted after results.

⇨ Software will ask for Nominations for the Senate Elections and Committee Formation.
Students can nominate their representative online.

⇨ Student Committees, Council and Core Team for Fest can also be formed
Committee will be constituted after approval from the Senate.
Nominations will be filled prior the submission of candidature.

⇨ Formation of New Club
Requirements and Need for new Club is recorded.
New Club is made after discussion in Senate.

⇨ Creation of Activity Calendar of all Clubs.
Year round activities of various clubs in the institute is created.

⇨ Submission of Event Report
Report of events conducted by each club is also submitted.
This is submitted along with the expenses of the event.

⇨ Issue of Notice/Notification
Notice can be issued by Dean Student.

2.2.1 Appendix A: Glossary

Gymkhana Office Bearer: All the members associated with the Student Gymkhana. All the committee Members, Club Coordinators and Counsel Members.

Student Senate: These are elected student Representatives from each batch. They form Student Senate.

Convenor: The Student Head of Student Senate is called Convenor.

Dean Student: Student Gymkhana and all Activities under it are headed by Dean Student.

Student: All the students enrolled in the College.

Cultural Council Convenor: The head of Cultural Council.

Technical Council Convenor: The Head of Technical Council.

Sports Council Convenor: The Head of Sports Council.

2.3 User Classes and Characteristics

The typical Student Gymkhana user is simply anyone that has access to the Internet and a web browser. It is assumed that the user is familiar enough with a computer to operate the browser, keyboard and mouse and is capable of browsing to, from and within simple websites and literate enough to do basic operations.

2.4 Operating Environment

Operating Environment of the System will be basic Computer with Network Connectivity.
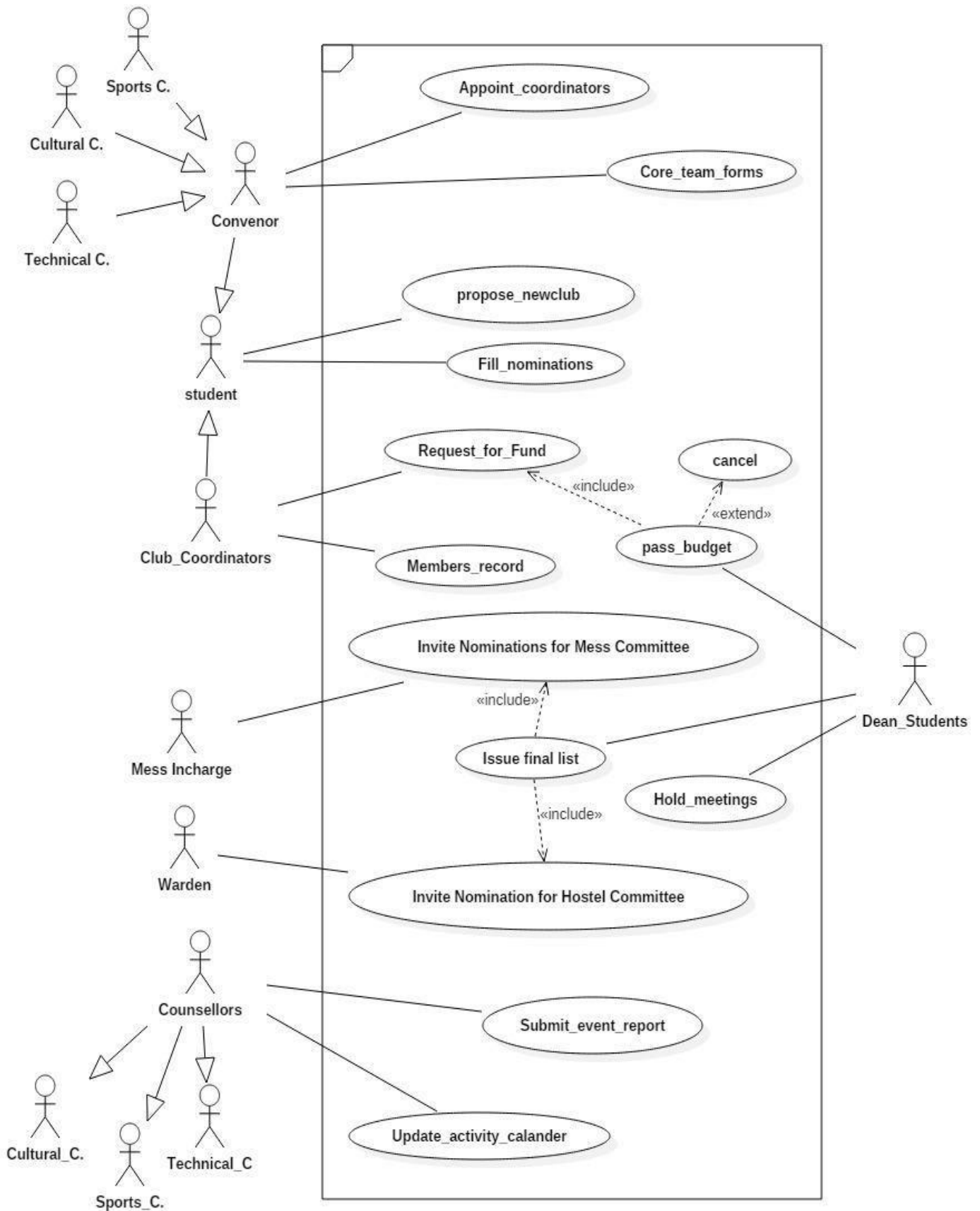
2.5 Design and Implementation Constraints

The Software will be designed in English Language only. Native languages are not supported by software itself, although if the underlying platform allows it, there is no objection by the part of software developers.

2.6 Assumptions and Dependencies

It is assumed that the platform on which the software is operating is working correctly, such as Network connectivity, Operating system, as well as Hardware components such as Hard disk, RAM, processor, network interface card, are functioning as per requirements. Also, it is assumed that the required technology to run the software is present in the system.

3.0 System Features

4.0 Use Cases

UC ID	UC#1	
Use case Name	new_club	
Description	proposal for the formation of new club	
Actor	Student	
Precondition	club doesn't exists	
	1.	formation of new clubs to the convenor with proper documentation of funds
	2.	application is forwarded to the Dean (S) through the counsellors for the final approval
Post Condition	Club is formed and then coordinators, co-coordinators, and faculty incharge are to be selected .	

UC ID	UC#2	
Use case Name	Members_records	
Description	Members list of various clubs is uploaded on the online portal	
Actor	Club-coordinator and coco	
Precondition	must be co and coco	
Main Flow	1.	upload the final list of the registered members in the club.
Post Condition	List should be made available to the concerned authorities.	

UC ID	UC#3	
Use case Name	update_activity_calendar	
Description	Shows the event scheduled	
Actor	Student	
Precondition	All events need to be decided and their dates need to be fixed	
	1.	co and coco book events
	2.	student views the activity calendar
	3.	receives notification
	4.	Coordinators & co-coordinators can be able to modify event details & delete an event
Post Condition	Activities should not clash with each other and other academic affairs or semester examination.	
Alternate Flow	if any objection is raised by the Dean (S) against the selected candidates then there is need for reconsideration.	

UC ID	UC#4	
Use case Name	club_membership	
Description	club registration should be done online	
Actor	Students	
Precondition	Can apply any time of the year	
	1.	fill the form
	2.	Submit the form
	3.	updated list of names appears to co or coco
Post Condition	Registration fees must be handed over to CO or COCO	

UC ID	UC#5	
Use case Name	session_booking	
Description	To book session	
Actor	Co & Coco	
Precondition	must be CO & COCO	
	1.	session booked by CO and COCO
	2.	Notification of booked session to all students
	3.	CO can update a session
	3.	CO can cancel a session
Post Condition	In case of any clash, Session must not be booked	
Alternate Flow	iif any event clashes then it need to be changed	

UC ID	UC#6	
Use case Name	club_details	
Description	Club detail is being displayed	
Actor	Students	
Precondition	Club details should be updated	
	1.	Display information of club
	2.	link to page of club website and contact details.
Post Condition	year end co & coco change	

UC ID	UC#7	
Use case Name	Core_team_forms	
Description	Convener invites nominations for core team formation	
Actor	Convener	
Precondition		
	1.	Nominations are invited by the convenor
	2.	Students who have applied for the post are invited for the interview, which is conducted by respective counselors.
	3.	The selected students list is further sent to the Dean(S)
Post Condition	No objection should be there against the selected student.	
Alternate Flow	if any objection is raised by the Dean (S) against the selected candidates then there is need for reconsideration.	

UC ID	UC#8	
Use case Name	Fill_nominations	
Description	fill the nomination form for election of senate or the committees of Mess and Hostel	
Actor	Students	
Precondition	Respective incharges should notify students about the nomination form and election.	
	1.	Once the forms are available online for filing nomination, students should login and fill the nomination for the respective post .
	2.	The nominations are submitted to the respective incharge and an email is sent for approval and confirmation.
	3.	Further respective incharge select the students by conducting election at their level and sends the list of selected students to the dean for final approval.
	4.	If dean has no objection then the list is approved but if there is any objection then incharge needs to reconsider.
Post Condition	New committee forms after the whole process.	

UC ID	UC#9	
Use case Name	Invite_nomination_for _hostel_committee	
Description	notification is sent to the students for the formation of new hostel committee	
Actor	Warden	
Precondition	There should be representative from every batch in the committee	
	1.	Warden notifies students when there is need to form a new hostel committee.
	2.	Forms are made available to the students to fill and apply.
Post Condition	Students who have applied are for being a part of committee are called and the selection is done internally and the list is forwarded to the Dean(S)	
Alternate Flow	If something went wrong or the Dean have some objection against the selected student then re-elect the member	

UC ID	UC#10	
Use case Name	submit_event_report	
Description	Whenever any event happens of any club or during any fest the final and detailed report is submitted.	
Actor	CO/COCO, Convenor, Counsellor, Dean(S)	
Precondition	The report should contain each and every detail about fund spent, participation, prizes if any.	
	1.	co-ordinators submit their respective club activities report to the convener.
	2.	convener then forward it to the counsellor and then it is notified to the Dean(S) for final submission.
Post Condition	Report should be accepted by the Dean(S)	
Alternate Flow	If there is something wrong in the report then it is given back.	

UC ID	UC#11	
Use case Name	notification	
Description	keeps you updated with recent activities	
Actor	Depends on activity (Student)	
Precondition	Even to be booked and planned	
	1.	Keeps you notify regarding upcoming events
	2.	notifications regarding cultural meetings
Post Condition	to be removed one event is done or cancelled	
Alternate Flow	If cancelled notification pops up.	

UC ID	UC#12	
Use case Name	Voting System	
Description	Club detail is being displayed	
Actor	Students	
Precondition	Club details should be updated	
	1.	Display information of club
	2.	link to page of club website and contact details.
Post Condition	year end co & coco change	

5.0 Other Non-Functional Requirements

5.1 Performance Requirements

The software should be able to run day and night continuously without getting disrupted on its own.

If there is any delay in the connection of the database, Proper Error Message must be displayed.

System must not exit without informing the user.

5.2 Safety Requirements

Information transmission should be securely transmitted to server without any changes in information.

5.3 Security Requirements

The main security concern is for User account (Gymkhana Office Bearers and Administrator) hence proper login mechanism should be used to avoid hacking. The password must be kept in proper encrypted format. The software also send any kind

of data to other machine than the user by itself unless tampered. The systems back-end servers shall only be accessible to authenticated administrators.

5.4 Software Quality Attributes

The software should be portable so that it can run over multiple platforms. The software should not crash the users machine or the remote server. It sends requests to download web pages. It should not eat excessive bandwidth on network. It should not put extra load on the users machine, making user handle to do any other work. The software should be extensible and should be able to get easily used as a component to larger systems. The software should be maintainable and testable easily. The software should be foremost usable and should work as per the software requirement specifications. The software should be intuitive to use and easy to learn.

6.0 Overview of the Document

The remaining sections of this document provide a general description, including characteristics of the users of this project, the product's hardware, and the functional and data requirements of the product. General description with functional requirements of the project is discussed in section Overall Description of this document. External Interface Requirements gives the Hardware, Software and Communication Interfaces designing the Gymkhana Software. It also gives the user viewpoint of product. System Features also gives the specific requirements of the product. It also discusses about the various use cases included in the Project. Last Section of gives detail about Non Functional requirements.